

## G E Kennedy, medical anthropologist

### The 3,000-year history of conjoined twins

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Even today we do not fully understand the etiology of conjoined twins. How were such births viewed in the past, when there was even less knowledge about fetal development?

Anecdotal reports of viable conjoined twins in European medical history date back more than 1,000 years.<sup>1,2</sup> But the first well-known case was not documented until 1811, when 2 boys—Chang and Eng—were born in Bangkok, Thailand, attached to each other at the sternum. P T Barnum named them the “Siamese twins.” As they traveled the world with Barnum’s circus, they consulted a multitude of physicians. All, including Rudolf Virchow, concluded that separation would be fatal to both.<sup>3</sup> This prognosis may have been welcomed by the twins because their wealth and fame depended on their conjoined state. They married sisters, sired a total of 21 children, and died within hours of each other at age 61. An autopsy found that they shared no organs. They only shared a small amount of liver tissue, peritoneum, and the hypogastric artery and vein. Death probably came to the surviving twin not from fright, as initially stated, but from slow exsanguination as blood flowing into the already dead twin was not returned.<sup>4</sup>

Artistic representations of the human body date back 15,000 years. From this earliest period of art itself, the ill and the deformed were portrayed almost as often as the healthy and vigorous.<sup>5</sup> Given the superstition and fear that must have accompanied conjoined births—and their rarity—it would come as no surprise if such births had never been portrayed.

Nevertheless, excavations of Tlatilco, a small Mexican village that existed about 3,000 years ago, have revealed remarkably accurate clay sculptures of a wide range of facial and cranial duplications. Many of these artifacts are small female figurines with small waists and breasts, short phocomelic arms, and bulging thighs (see figure linked to this article on our web site).<sup>6</sup> Although most of the figurines have normal faces, some have double faces with a shared, central, cyclopic eye and normal lateral eyes.<sup>7</sup> Others

have separate faces, and a few are fully dicephalic (double headed) with separate necks on a single body.<sup>8</sup>

Tlatilco was part of the Olmec cultural world, sharing its maize agriculture, iconography, and much else from that widespread society. However, these small diprosopus (partial facial duplication) and dicephalic statues appear only at Tlatilco and nowhere else in Olmec art.<sup>8</sup> Although representations of “monstrous” beings are common in all traditional iconography, the faces and heads from Tlatilco are interesting because they are developmentally and proportionately correct—they are not just impossible hybrids, such as centaurs. The reports of unexplained clusters of conjoined-twin births around the world<sup>10-12</sup> make the biologic accuracy of these Tlatilco figures particularly tantalizing.

G E Kennedy is uniquely positioned to offer her anthropologic and anatomic perspective to this discussion. Kennedy did her doctoral research in anatomy at St Thomas’ in London and has an interest in the history of medicine.

#### References

- 1 Rickham P. The dawn of paediatric surgery: Johannes Fatio (1649-1691)—his life, his work and his horrible end. *Prog Pediatr Surg* 1986;20:94-105.
- 2 Bondeson J. The Biddenden Maids: a curious chapter in the history of conjoined twins. *J R Soc Med* 1992;85:217-221.
- 3 Wallace I, Wallace A. *The Two*. New York: Simon & Schuster; 1978.
- 4 Alexander E. The original Siamese twins: we know why Chang died, but why did Eng? *N C Med J* 2001;62:66-68.
- 5 Warkany J. History of teratology. In: Wilson J, Fraser F, eds. *Handbook of teratology*. Vol 1. New York: Plenum; 1977.
- 6 Porter M. Tlatilco and the preclassic cultures of the New World. *Viking Fund Pub Anthro* 1953, No. 19.
- 7 Bernal I. *The Olmec World*. Berkeley: University of California Press; 1969.
- 8 Rosshandler I. *Man Eaters and Pretty Ladies*. Montreal: Montreal Museum of Fine Arts; 1971.
- 9 Bendersky G. Tlatilco sculptures, diprosopus, and the emergence of medical illustrations. *Perspect Biol Med* 2000;43:477-501.
- 10 Rees AE, Vujanic GM, Williams WM. Epidemic of conjoined twins in Cardiff. *Br J Obstet Gynaecol* 1993;100:388-391.
- 11 Kaplan M, Eidelman AI. Clustering of conjoined twins in Jerusalem, Israel: an epidemiologic survey. *Am J Obstet Gynecol* 1983;145:636-637.
- 12 Bheattay E, Nelson MM, Beighton P. Epidemic of conjoined twins in Southern Africa. *Lancet* 1975;2:741-743.

